
Jobs and Workforce



NOVEMBER 21, 2013

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Outline

Virginia's Job Picture

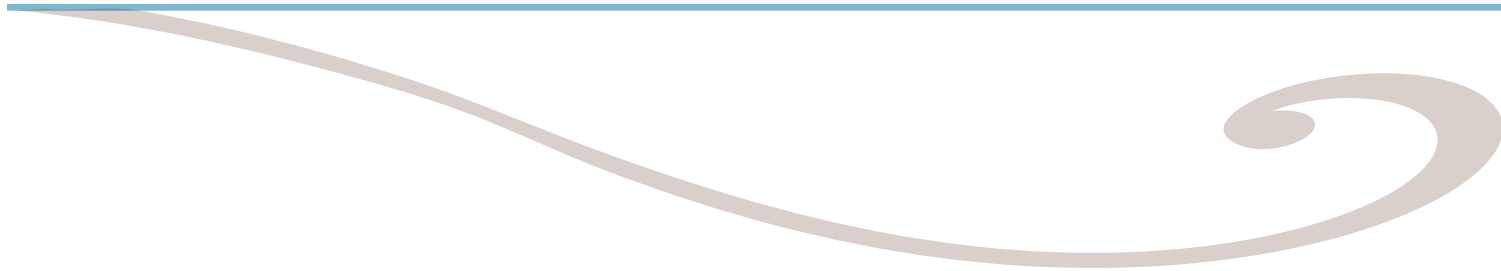
- Virginia Jobs Demand
- Virginia's Changing Workforce
- Mobility Patterns by Degree Type
- Using Data to Discuss Workforce Supply and Demand

Workforce

- Virginia's Workforce System
- Best Practices in Other States
- Virginia's Best Practices
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Concluding Thoughts

Virginia's Jobs Picture



Virginia Jobs Demand

- The total jobs demand for the Commonwealth combines the potential new jobs created by our economy (net new jobs) and the openings created by retirements and turnover (replacement jobs).
- These job estimates factor in shifts at the federal level including the continued loss of federal jobs and changes in contract spending.
- Virginia had an estimated 4,871,288 jobs in 2012. As shown below, over the next 10 years, Virginia will need to fill 2 million positions. 844,359 of these jobs will be new jobs, while 1,199,686 will be replacement jobs.

Year	Net New Jobs	Replacement Jobs	Total Demand
2012-2017	448,016	629,627	1,077,643
2017-2022	396,343	570,059	966,402
2012-2022	844,359	1,199,686	2,044,045

SOURCE: EMSI Complete Employment-2013.2; GMU Center for Regional Analysis, Dr. Stephen Fuller

Virginia Jobs Demand by Occupation

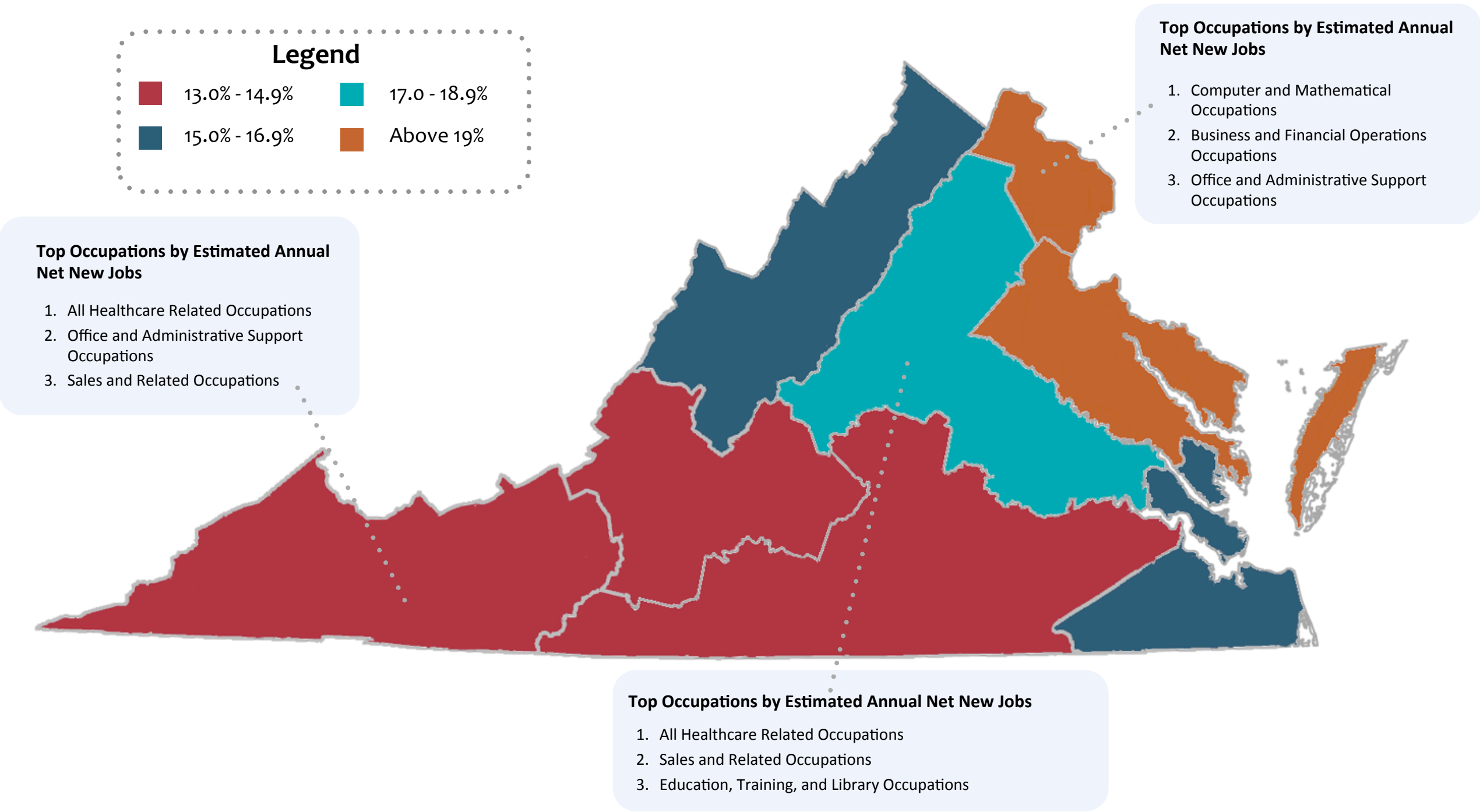
Number of New Workers by Occupation, 2012-2017

Net New Jobs	Total Demand
Sales and Related Services <i>(Retail Salespersons, Insurance Sales Agents, Travel Agents, Real Estate Agents, etc.)</i>	54,264
Business and Financial Operations <i>(Accountants & Auditors, Personal Financial Advisors, Management Analysts, etc.)</i>	48,619
All Healthcare <i>(Home Health Aides, Registered Nurses, Nursing Aides, Physicians, Licensed Vocational Nurses, etc.)</i>	48,219
Office and Administrative Support <i>(Customer Service Reps., Receptionists, Payroll and Timekeeping Clerks, etc.)</i>	43,406
Personal Care and Services <i>(Childcare Workers, Fitness Trainers, Gaming Dealers, Animal Trainers, etc.)</i>	32,338
Education, Training, and Library Services <i>(Teachers, Professors, Museum Curators, Librarians, etc.)</i>	32,066
Replacement Jobs	Total Demand
Sales and Related Services <i>(Retail Salespersons, Insurance Sales Agents, Travel Agents, Real Estate Agents, etc.)</i>	96,704
Office and Administrative Support <i>(Customer Service Reps., Receptionists, Payroll and Timekeeping Clerks, etc.)</i>	76,074
Food Preparation and Serving <i>(Cooks, Waiters and Waitresses, Bartenders, Hosts and Hostesses, etc.)</i>	59,324
Management Occupations <i>(Chief Executives, Legislators, Financial Managers, Marketing and Sales Managers, etc.)</i>	38,990
Business and Financial Operations <i>(Accountants & Auditors, Personal Financial Advisors, Management Analysts, etc.)</i>	34,066
All Healthcare <i>(Home Health Aides, Registered Nurses, Nursing Aides, Physicians, Licensed Vocational Nurses, etc.)</i>	31,050

SOURCE: EMSI Complete Employment-2013.2; GMU Center for Regional Analysis, Dr. Stephen Fuller

Virginia Jobs Demand by Selected Region

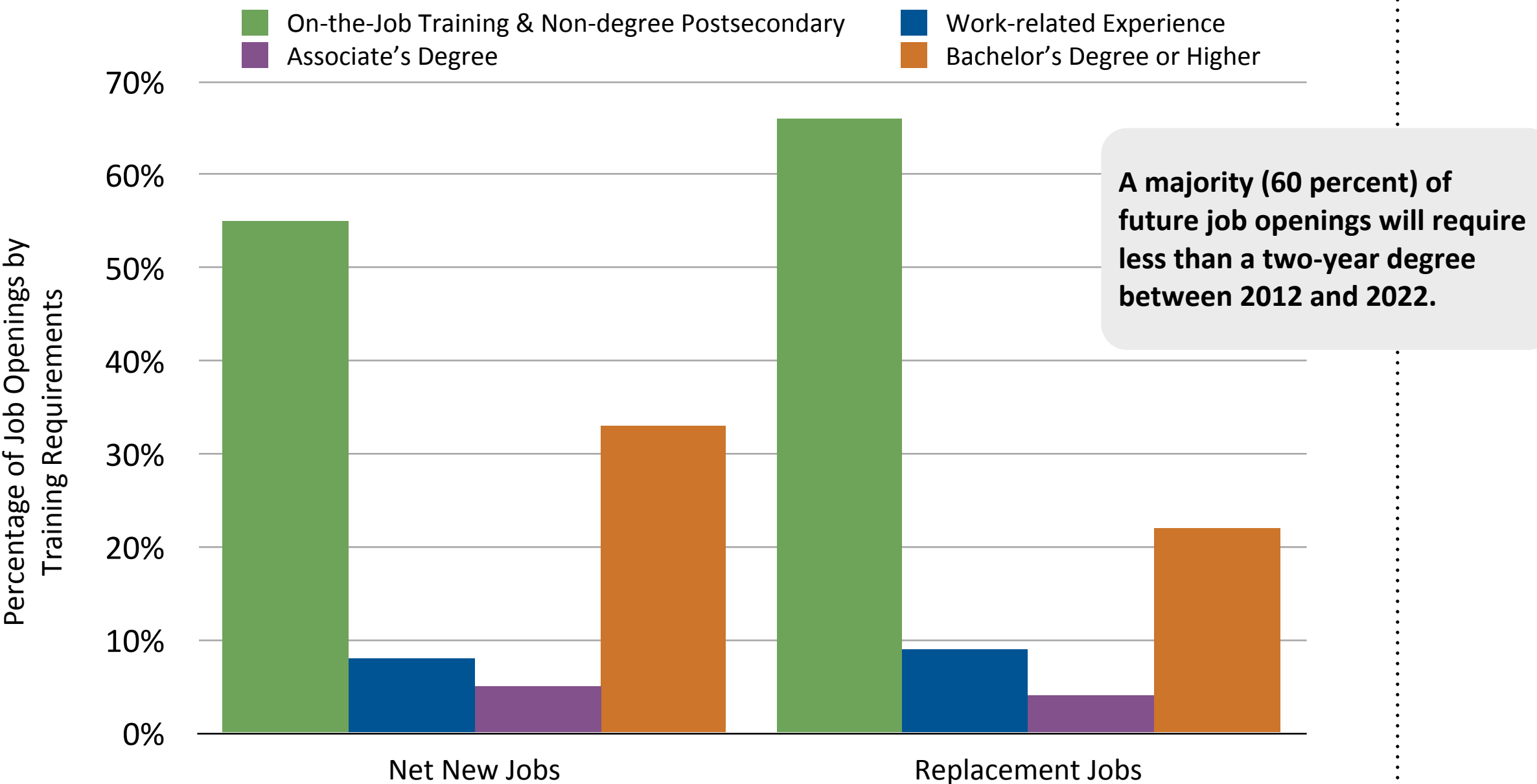
Percentage Change in Employment by Region, 2010 - 2020



SOURCE: Virginia Employment Commission, Labor Market Information, Occupation Projections
NOTE: Regions highlighted on the map are combined Workforce Board Investment regions.

Virginia Jobs Demand by Training Requirements

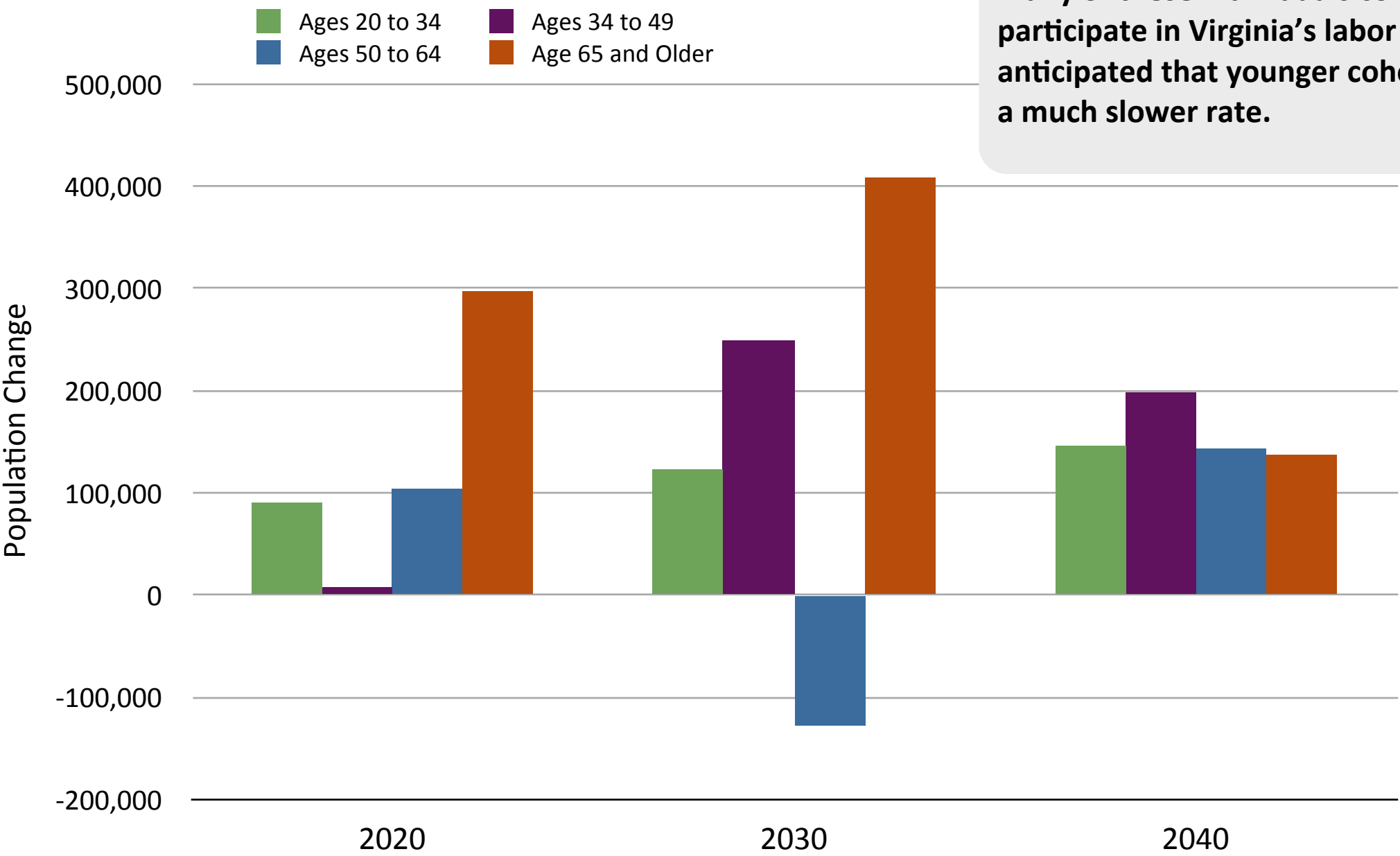
Jobs by Training Requirements, 2012-2022



SOURCE: EMSI Complete Employment-2013.2; GMU Center for Regional Analysis, Dr. Stephen Fuller
NOTE: Job totals used in this analysis reflect underestimates due to suppressed data.
On-the-job training includes short, medium, and long-term on-the-job training.

Virginia's Changing Workforce

Change in Population by Age Group



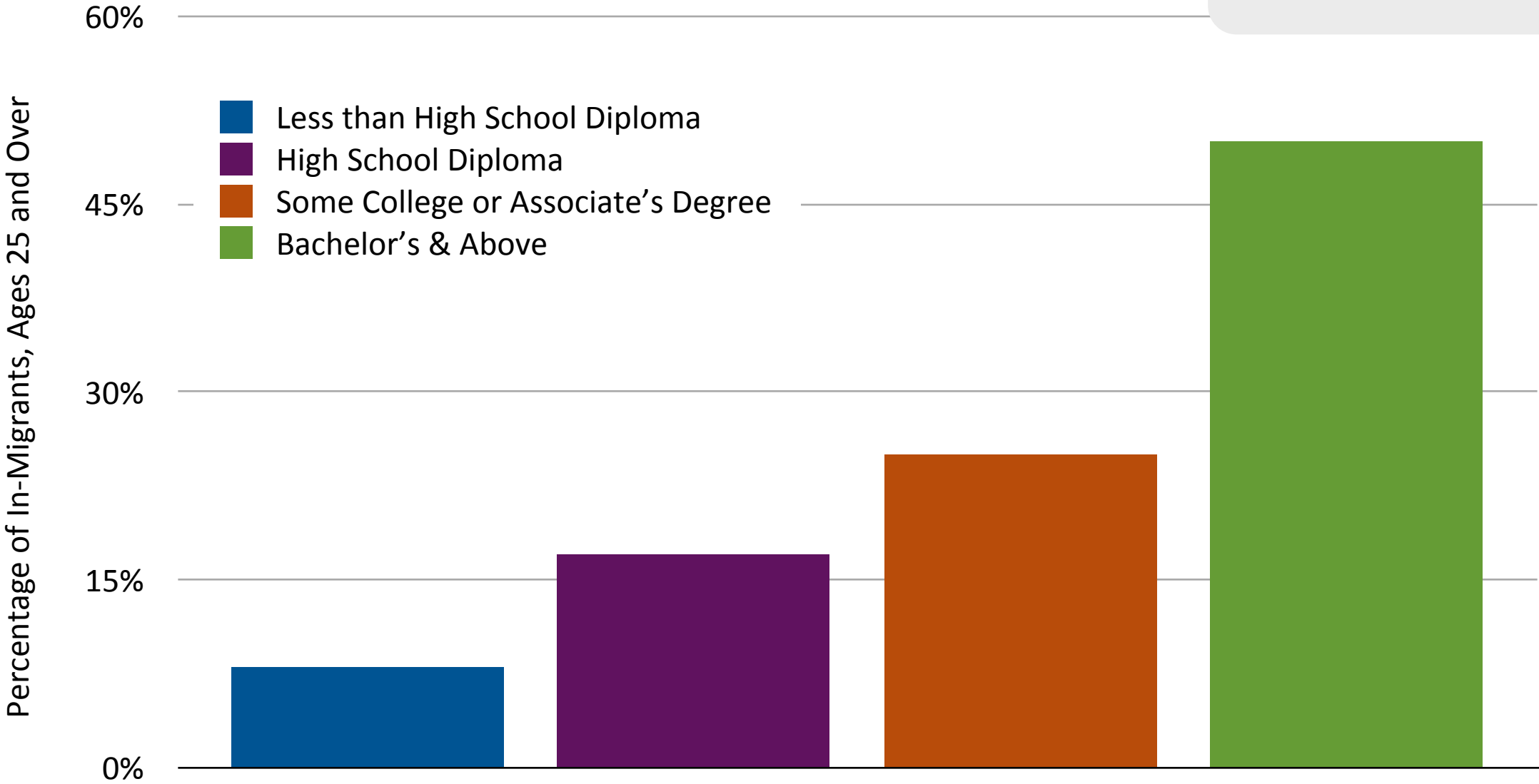
By 2030, there will be 700,000 additional Virginians age 65 and older. It is critical that many of these individuals continue to participate in Virginia's labor force, as it is anticipated that younger cohorts will grow at a much slower rate.

SOURCE: Weldon Cooper Center for Public Service, Demographics Research Group, Population Data

Mobility Patterns by Degree Type

Individuals that Moved to Virginia in the Last Year

Virginia imports talent. Close to fifty percent of individuals that moved to Virginia in the last year had a bachelor's degree or higher.



SOURCE: American Community Survey , 2007-2011

Using Data to Discuss Workforce Supply and Demand

Example: Richmond Region, Healthcare Related Occupations

Occupation	Estimated and Projected Employment			2012 Degree Awards					Licensure 2012
	2010	2020	Estimated Annual Openings*	Less than 2 Years	Associate's	Bachelor's	Above Bachelor's	Total Degrees	Total Licensures
Registered Nurses	12,199	14,834	485	302	356	311	187	1,156	893
Nursing Aides, Attendants, and Orderlies	7,625	11,034	439	60					913
Licensed Practical and Vocational Nurses	3,419	4,226	172	133				133	209

Information is the starting point for understanding our opportunities. For example, regional economies vary in terms of their industry and occupational mix.

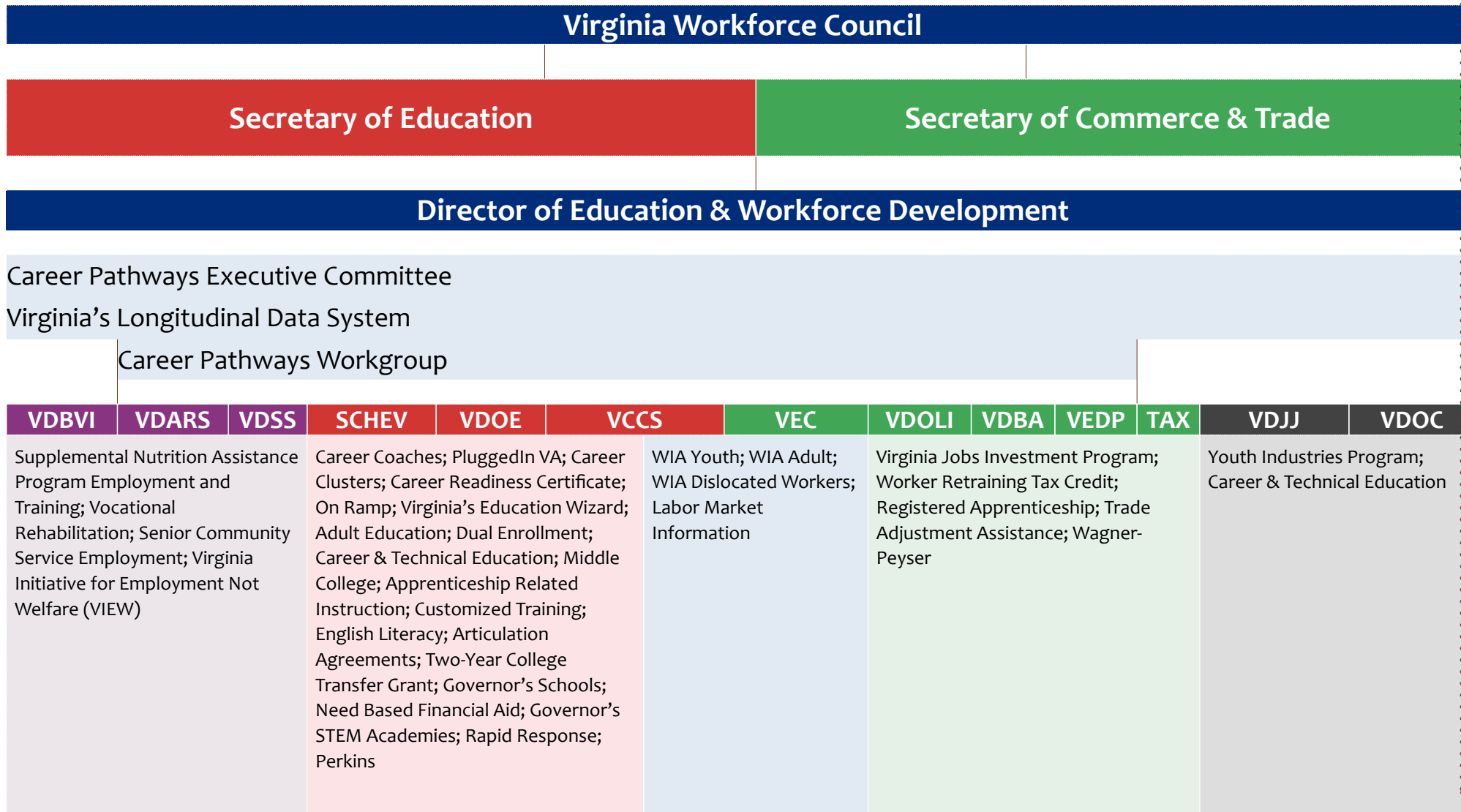
SOURCE: Virginia Employment Commission, Occupational Projections, 2012
 National Center for Education Statistics, IPEDS Data Center, 2012
 Virginia Department of Health Professions, Licensure, 2012

NOTE: The Richmond region includes: the City of Richmond and Charles City, Chesterfield, Colonial Heights, Goochland, Hanover, Henrico, New Kent, and Powhatan Counties. Licensure data reflects the address on record for the licensed individual. Nursing aides, attendants, and orderlies includes home health aides. Estimated annual openings includes net new jobs and retirements.

Workforce



Virginia's Workforce System



Agency Key

VDBVA: Virginia Department for the Blind and Vision Impaired

VDARS: Virginia Department of Aging and Rehabilitative Services

VDSS: Virginia Department of Social Services

SCHEV: State Council for Higher Education in Virginia

VDOE: Virginia Department of Education

VCCS: Virginia Community College System

VEC: Virginia Employment Commission

VDOLI: Virginia Department of Labor and Industry

VDBA: Virginia Department of Business Assistance

VEDP: Virginia Economic Development Partnership

TAX: Virginia Department of Taxation

VDJJ: Virginia Department of Juvenile Justice

VDOC: Virginia Department of Corrections

Regional Workforce Development Partners

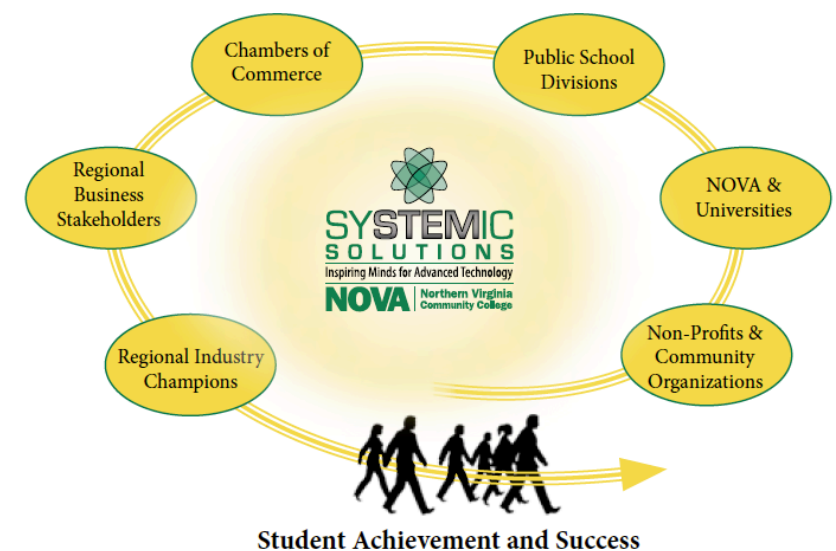


Best Practices in Other States

- **Pennsylvania** in 2011 passed legislation to codify its industry partnership approach to workforce development. In addition to creating a funding stream, this bill required the Department of Labor and Industry to publish targeted industry sectors to guide industry partnership development, as well as high-priority occupations for investments from selected state workforce programs.
- **Maryland** appropriated \$2.5 million dollars for 2014 to fund EARN Maryland. This program will provide planning and implementation grants to regional, business-led partnerships that will examine needs for skilled workers within an industry and create and implement training opportunities to close identified gaps.
- In **Colorado**, the Colorado Workforce Development Council, along with other partners, hosted The Sectors Summit in early 2013 to discuss how Colorado's workforce and education system can align with 14 key industries through regional partnerships.

Virginia's Best Practices

- Several of Virginia's regions have been recognized nationally for their efforts to enhance workforce training to meet business needs. Here are some examples:
- **Produced in Virginia** is a partnership between UVA's School of Engineering and Applied Sciences and the Virginia Community College System. Partners in Virginia's Region 2000 initiated this program that now reaches 18 community colleges to meet the needs of the region's nuclear energy companies. Through Produced in Virginia, students can earn an engineering associate's degree and finish a four-year degree at the University of Virginia via distance learning.
 - **SySTEMic Solutions** is public-private partnership in eight public school divisions throughout Northern Virginia where partners have designed a STEM pipeline to meet the needs of the region's many technology-focused employers. This program partners business, public K-12 school divisions, Northern Virginia Community College, George Mason University, and George Washington University.
 - The **Advanced Manufacturing Career Pathways Initiative** in Virginia's Peninsula region is aligning training and education opportunities to fill 11,000 advanced manufacturing jobs in the region by 2016. This partnership includes Thomas Nelson Community College, the Peninsula Council for Workforce Development, six local school divisions, and fourteen employers.



State Workforce Tools for Information



The Virginia Education Wizard is an online career and college planning tool designed to engage students in future job opportunities. A unique feature of the system is that it provides students with information on projected job openings for occupations at the state and regional level over the next five years.



The Virginia Employment Commission's Labor Market Information system provides data on past, current, and future employment; wages; jobs openings; economic indicators; unemployment; and demographics.



The Virginia Longitudinal Data System (VLDS) merges data across agencies - the Virginia Department of Education, the State Council for Higher Education in Virginia, the Virginia Community College System, and the Virginia Employment Commission - to help Virginia answer education and workforce questions.



The Virginia Department of Defense Procurement Economic Impact Evaluation Model will assist professionals from across public, private, and nonprofit sectors with assessing the potential economic and workforce impacts created by changes in defense procurement spending in Virginia.

VIRGINIA'S WORKFORCE SYSTEM REPORT CARD

STEM-H Pipeline

GOAL: Increase the number of students with science, technology, engineering, math, and healthcare skills.

Registered apprenticeships and secondary & postsecondary enrollments in STEM-H programs ↑
Registered apprenticeships and secondary & postsecondary STEM-H credentials earned ↑

Secondary Educational Attainment

GOAL: Enable all students, including at-risk students, to complete high school and prepare for college.

Advanced Studies diplomas earned ↑
Standard diplomas earned →
Enrollment in GED or adult high school diploma preparation program ↓
GED or adult high school diplomas earned ↓

Postsecondary Educational Attainment

GOAL: Increase the number of students entering college and earning degrees, certifications, licenses, & apprenticeships.

Postsecondary enrollments ↑
Postsecondary credentials earned ↑
Industry certifications or state licensures earned ↑
Apprenticeship credentials earned ↑

Career & College Readiness

GOAL: Increase student readiness for both postsecondary education and the workplace.

Workplace Readiness Skills Credentials earned ↑
Career Readiness Certificates earned ↑
Community college certificates or degrees earned by secondary students ↑
Dual-enrollment credits earned →
Advanced Placement (AP) course enrollment and/or exam completion ↑

Employment & Business Development

GOAL: Reduce unemployment and increase both employment and income.

Labor force participation rate →
Percentage change in total annual wages ↑
Unemployment rate ↑
Average weeks on unemployment →
Percentage change in employment ↑
Percentage change in establishments ↑
Demand-focused workforce solutions at the state and regional level ↻

↻ Under Development

Emerging Workforce in Manufacturing

GOAL: Increase credentials and enrollments in manufacturing-related programs; improve the reach of manufacturing instruction and overall employment.

Dual-enrollment students in manufacturing-related career and technical education courses ↑
Participation by secondary students in project-based competitive events ↑
Completions of career and technical education within a manufacturing program of study ↑
Participation in manufacturing-related community college internship programs ↑
State-registered apprentices in manufacturing ↑
Secondary students earning certifications related to manufacturing ↑
Community college students earning credentials in a manufacturing program of study ↑
Annual new hires in the manufacturing industry →
Shared assets (labs, equipment, instructors) -
Shared manufacturing curriculum programs -

Performance
Trend

Improving ↑
Maintaining →
Worsening ↓
Trend data not yet available -

Assessing Regionally-Driven Workforce Solutions

↪ This year, a new indicator for Virginia's Workforce System Report Card will strengthen the conversation around regional approaches to workforce development by assessing regions along a continuum.

The Stages of Regional Business-Driven Workforce Solutions

Stage	Definition
Stage 1: Status quo	<ul style="list-style-type: none">• The region continues to exhibit an approach to workforce development in silos.• The region does not engage with the private sector.
Stage 2: Convening	<ul style="list-style-type: none">• A workforce intermediary (an organization with a deep understanding of employer and workforce issues in a particular industry) takes the first step in engaging a stakeholder group that includes economic developers, business leaders, educators, and workforce trainers around workforce issues for a key regional industry.• Industry leaders are active partners in the regional consortium or partnership that forms as a result of this initial engagement.
Stage 3: Understanding	<ul style="list-style-type: none">• The regional consortium or partnership conducts a gap analysis of timely and accurate labor market information and other data to identify workforce challenges and opportunities for an industry.• This stage includes engaging businesses on projected workforce needs in key occupations as a supplement to labor market information.
Stage 4: Planning	<ul style="list-style-type: none">• The regional consortium or partnership develops an approach to address gaps by pooling resources, aligning programs, and redesigning program curricula based on active employer engagement to determine workforce skills required for occupations.• The resulting plan has a clear, business-driven vision. Each partner identifies how they can collaboratively contribute to the overall achievement of the vision.
Stage 5: Implementation	<ul style="list-style-type: none">• The regional consortium or partnership works together to implement the approach to address needs by redesigning curricula, aligning programs, redirecting resources with an intense focus on both serving businesses and their future employees.• The regional consortium or partnership sustains their efforts over a long period of time.• The regional consortium or partnership promotes systemic change within the region's approach to workforce.

Concluding Thoughts



Blueprint Virginia & Workforce: Highlights

Goal: Create a more robust workforce to meet the needs of a growing and diverse business community.

Industry Council Chair: Mike Daniels, Chairman of LMI

- Strengthen the private sector voice in state-level workforce efforts (new Virginia Workforce Industry Board).
- Strengthen Virginia’s approach to workforce development at the state level and within regions.
- Elevate Virginia’s workforce system brand so that it is nationally recognized among businesses.

Data & Dissemination	Public-Private Partnerships	Targeted Sectors & Populations	Regional Solutions
<ul style="list-style-type: none">• Articulate and disseminate information on workforce that catalyzes a dialogue on the future of Virginia’s workforce at the state level and within our regions (i.e. state of the workforce).• Continue to use approaches that provide students with information on future careers (i.e. Virginia Education Wizard, Academic and Career Plans, and Career Coaches).	<ul style="list-style-type: none">• Establish a private sector-led Virginia Workforce Industry Board to provide input to state workforce leaders on the needs of the business community.• Collaborate with businesses that have robust in-house training programs to source the non-proprietary elements of these programs.	<ul style="list-style-type: none">• Encourage adequate funding for state-of-the-art equipment and training to address new areas and advanced technologies (i.e. robotics) for high-demand fields such as advanced manufacturing, data analytics, bioscience, and information technology.	<ul style="list-style-type: none">• Support the development of business-driven regional workforce solutions that meet the needs of a key regional industry over a sustained period of time, particularly for “mid-skill” workers.



Concluding Thoughts

- Virginia's continued prosperity will be determined largely by our success in meeting future workforce skill requirements.
- Much of the hard work of preparing future workers and up-skilling the existing workforce will be dependent on ongoing, communicative partnerships between our business leaders and our education and workforce professionals. The trick is to remain flexible and responsive to both market data and longer-term trends.
- Workforce quality emerged as a very high priority within Blueprint Virginia, as evidenced by the recommendations on the previous slide.
- Future efforts must include:
 - Ensuring appropriate and secure funding for education and workforce training resources;
 - Providing a set of incentives for regional collaboration and innovative, regionally driven, and flexible solutions.
 - Building a framework that helps leaders use the wealth of existing data to better inform education and workforce training decisions.

Sites of Interest

Virginia Performs:
VaPerforms.virginia.gov

Council on Virginia's Future:
future.virginia.gov

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